

Applicants: Taka Aki Sato and Junn Yanagisawa
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Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1-120. (canceled)

121. (currently amended) A method of identifying a compound that inhibits specific binding between a signal-transducing protein and a cytoplasmic protein containing the amino acid sequence (G/S/A/E)-L-G-(F/I/L) (SEQ ID NO: 1), wherein each - represents a peptide bond, each parenthesis encloses amino acids which are alternatives to one other, and each slash within such parentheses separates the alternative amino acids, which comprises:

(a) contacting the cytoplasmic protein bound to the signal-transducing protein with a plurality of compounds under conditions permitting binding between a known compound previously shown to be able to (A)(i) displace the signal-transducing protein bound to the cytoplasmic protein and (ii) form a complex with the cytoplasmic protein to which the signal-transducing protein is no longer bound, or (B)(i) displace the cytoplasmic protein bound to the signal-transducing protein and (ii) form a complex with the signal-transducing protein to which the cytoplasmic protein is no longer bound; and is no longer bound, and the signal-

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transducing protein bound to the cytoplasmic protein; and

(b) detecting the displaced signal-transducing protein or the complex from step (a)(A), or the displaced cytoplasmic protein or the complex from step (a)(B), wherein the presence of any of the displaced signal-transducing protein, the displaced cytoplasmic protein, the complex between the compound and the cytoplasmic protein, or the complex between the compound and the signal-transducing protein indicates that the compound inhibits specific binding between the signal-transducing protein and the cytoplasmic protein;

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wherein the signal-transducing protein is a CD4 receptor, a p75 receptor, a serotonin 2A receptor, a serotonin 2B receptor, a NMDA receptor, or a K⁺ channel; or is a composition comprising a peptide selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16 essentially of 3-13 amino acids having at its carboxyl terminus the amino acid sequence (S/T) X (V/I/L) (SEQ ID NO: 4), wherein each represents a peptide bond, each parenthesis encloses amino acids which are alternatives to one other, each slash within such parentheses separates the alternative amino acids, and the * represents any amino acid which selected from the group comprising the twenty naturally occurring amino acids.

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122. (previously presented) The method of claim 121, wherein the inhibition of specific binding between the signal-transducing protein and the cytoplasmic protein affects the transcription activity of a reporter gene.

123. (previously presented) The method of claim 122, where in step (b) the displaced signal-transducing protein or the complex is detected by comparing the transcription activity of a reporter gene before and after the contacting with the compound in step (a), where a change of the activity indicates that the specific binding between the signal-transducing protein and the cytoplasmic protein is inhibited and the signal-transducing protein is displaced.

124. (previously presented) The method of claim 122, where in step (b) the displaced cytoplasmic protein or the complex is detected by comparing the transcription activity of a reporter gene before and after the contacting with the compound in step (a), where a change of the activity indicates that the specific binding between the signal-transducing protein and the cytoplasmic protein is inhibited and the cytoplasmic protein is displaced.

125. (previously presented) The method of claim 121, wherein the cytoplasmic protein is bound to a solid support.

126. (previously presented) The method of claim 121, wherein the compound is bound to a solid support.

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127. (previously presented) The method of claim 121, wherein the compound comprises an antibody, an inorganic compound, an organic compound, a peptide, a peptidomimetic compound, a polypeptide or a protein.

128. (previously presented) The method of claim 121, wherein the contacting of step (a) is in vitro.

129. (previously presented) The method of claim 121, wherein the contacting of step (a) is in vivo.

130. (previously presented) The method of claim 129, wherein the contacting of step (a) is in a yeast cell.

131. (previously presented) The method of claim 129, wherein the contacting of step (a) is in a mammalian cell.

132. (previously presented) The method of claim 121, wherein the signal-transducing protein is a cell surface receptor.

133-139. (canceled)

140. (previously presented) the method of claim 121, wherein the cytoplasmic protein contains the amino acid sequence SLGI (SEQ ID NO:3), wherein each - represents a peptide bond, each parenthesis encloses amino acids which are alternatives to one other, and each slash within such parentheses separates the alternative amino acids.

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141. (previously presented) The method of claim 121, wherein
the cytoplasmic protein is Fas-associated phosphatase-1.

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